



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,283	12/31/2001	Douglas P. Brown	10158 (NCR.0068P2US)	1213

26890 7590 05/04/2004

JAMES M. STOVER  
NCR CORPORATION  
1700 SOUTH PATTERSON BLVD, WHQ4  
DAYTON, OH 45479

EXAMINER

ALAM, SHAHID AL

ART UNIT	PAPER NUMBER
----------	--------------

2172

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/039,283

Applicant(s)

BROWN ET AL.

Examiner

Shahid Al Alam

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☒ Claim(s) 16,21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                          |                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                              | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                     | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5.8</u> . | 6) <input type="checkbox"/> Other: ____                                                |



UNITED STATES DEPARTMENT OF COMMERCE

**U.S. Patent and Trademark Office**

Address : COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
---------------------------------	-------------	---------------------------------------------------	---------------------

EXAMINER
----------

ART UNIT	PAPER
----------	-------

9

DATE MAILED:

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner for Patents**

Shahid Al Alam  
Primary Examiner  
Art Unit: 2172

Art Unit: 2172

## **DETAILED ACTION**

1. Claims 1 – 31 are pending in this application.

### ***Information Disclosure Statement***

2. The reference cited in the information disclosure statement (IDS), Paper number 5 and 8, have been considered by the examiner.

### ***Priority***

3. This application is a CIP of 09/923,975 filed on 7 August 2001 which is a CIP of 09/608,977 filed on 30 June 2000.

### ***Claim Objections***

4. Claims 16, 21 and 22 are objected to because of the following informalities: The use of a computer has not been explicitly indicated in the claims.  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17 – 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 17 recite the limitation "The database system" in claim. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 – 15, 23 – 29 and 30 – 31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

**MPEP 2106 IV.B.2.(b)**

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. *Schrader*, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts.

Claims 1 – 15 and 30 – 31, in view of the above cited MPEP sections, are not statutory because they merely recite a number of computing steps without producing any tangible result and/or being limited to a practical application within the technological arts. The use of a computer has not been indicated.

**MPEP 2106.II.A**

A process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See *In re Warmerdam*, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994).

Claims 23 - 29, in view of the above cited MPEP sections, are not statutory because they merely recite a number of computing steps without producing any tangible result and/or being limited to a practical application within the technological arts.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 – 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,067,542 issued to Felipe Carino (“Carino”) and in view of U.S. Patent Number 5,857,192 issued to Samuel Fitting (Fitting”).

With respect to claim 1, Carino teaches importing environment information of a target database system (column 3, lines 28 – 62), the environment information comprising random sample statistics of the target database system (column 14, lines 58 – column 15, line 9);

storing the random sample statistics in a storage location (column 3, lines 41 – 49 and column 18, lines 32 – 35); and

Art Unit: 2172

using the random sample statistics in performing query plan analysis for a given query in the test system (column 3, lines 41 – 49 and column 18, lines 32 – 35).

Carino does not explicitly teach importing information into a test system as claimed.

Fitting discloses claimed test system, where to retrieve information about product from the database, the controller of test system creates a request file and communicates it to the shared file directory of the shared resource manager (SRM) (see column 4, lines 16 – 26, see also abstract, column 1, lines 14 – 22, column 2, lines 6 – 18; Fitting).

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine Fitting with Carino to permit bi-directional messaging between a test system and a database so as to allow the test system to retrieve product information, such as model number, from the database in substantially real-time and thereby, eliminating the need for information redundancy in the manufacturing system (column 1, lines 54 – 60; Fitting).

As to claim 2, importing the random sample statistics from a selected segment of the target database system (column 3, lines 28 – 62 and column 14, line 58 – column 15, line 9; Carino).

As to claim 3, the target database system comprises plural access modules, wherein importing the random sample; statistics comprises importing the random sample statistics associated with less than all of the access modules (column 7, lines 56 – 60; Carino).

As to claim 4, importing the random sample statistics associated with a randomly selected one or randomly selected ones of the access modules (column 16, lines 19 – 22; Carino).

Art Unit: 2172

As to claim 5, importing at least some of the following information: database name, base table name, number of rows in the base table, number of indexes for the base table, minimum row length in the base table, maximum row length in the base table, secondary index name, number of rows in a secondary index table, and average row size of the secondary index table (column 16, lines 15 – 50; Carino).

As to claim 6, importing the environment information of a target database system having plural access modules that manage concurrent access of plural portions of data stored in the target database system (column 2, lines 21 – 31; Carino).

As to claim 7, importing information pertaining to a configuration of the target database system (column 15, lines 6 – 9; Carino).

As to claim 8, importing cost-related information of the target database system (column 15, lines 3 – 9; Carino).

As to claim 9, importing the cost-related information comprises importing information comprising at least some of the following: number of nodes in the target database system, number of CPUs per node, number of access modules per node, an amount of memory allocated per access module, disk access speed, and network access speed (see Figure 3 and column 15, lines 3 – 9; Carino).

As to claim 10, emulating an environment of the target database system using the random sample statistics, wherein performing the query plan analysis comprises performing the query plan analysis in the emulated environment (column 18, lines 9 – 31; see also column 12, lines 24 – 34; Carino).



Art Unit: 2172

As to claim 11, emulating the environment at one of plural emulation levels, the plural emulation levels comprising a system level and a user session level (column 18, lines 9 – 31; see also column 12, lines 24 – 34; column 16, lines 8 – 42 and column 17, lines 1 – 25; Carino).

As to claim 12, generating a full set of statistics from the random sample statistics column 15, lines 3 – 20; Carino).

As to claim 13, invoking an optimizer to use the full set of statistics to perform the query plan analysis (column 3, lines 41 – 49; Carino).

As to claim 14, using an SQL DIAGNOSTIC statement to identify random sample statistics to capture (column 14, lines 53 – 59; Carino).

As to claim 15, using another SQL DIAGNOSTIC statement to set random sample statistics in the storage location (column 14, lines 53 – 59; Carino).

Claims 16 – 22 are essentially the same as claims 1 – 15 except that it set forth the claimed invention as a test system rather than a method and rejected for the same reasons as applied hereinabove.

Claims 23 – 31 are essentially the same as claims 1 – 15 except that it set forth the claimed invention as an article rather than a method and rejected for the same reasons as applied hereinabove.

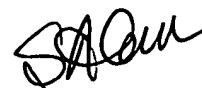
Art Unit: 2172

***Contact Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahid Al Alam whose telephone number is (703) 305-2358. The examiner can normally be reached on Monday-Thursday 8:00 A.M. - 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shahid Al Alam  
Primary Examiner  
Art Unit 2172

28 April 2004